Palliative care: an essential component of the HIV care continuum

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Abstract

Although antiretroviral therapy has reduced mortality among people living with HIV, inadequate treatment coverage, ageing, and increasing rates of organ failure and malignancies mean that high quality care must include care at the end of life. This paper summarises the epidemiology of HIV in relation to mortality, and the symptoms and concerns of people living with HIV with advanced disease. In response to this evidence of palliative care need, the princples and practice of palliative care are described, and the evidence of effectiveness and cost effectiveness is appraised. The core practices of palliative care offer a mechanism to enhance the person-centredness of HIV care, and we identify the current gaps in person-centredness of care, and present evidence of effective models of care to address this. Current policies are detailed that require governments and health systems to respond to the palliative care needs of their population. We conclude this overview of the literature with evidence-based recommendations to improve the delivery of, and access to, high quality HIV care until the end of life, reducing unncesessary suffering while optimising person-centred outcomes.

Introduction

HIV epidemiology is changing in all parts of the world. The roll out of antiretroviral therapy (ART) has changed HIV infection from an illness with poor prognosis to a chronic condition. However, in many countries ART coverage is poor and mortality rates from advanced HIV infection remain high. Where treatment coverage is good, some progressive conditions have higher prevalence among people living with HIV compared to the general population. For those responding well to treatment, comorbidities of ageing are emerging. For each of these situations, palliative care is an effective, cost effective and necessary component of health service delivery, and is emphasised in global policy. Little research is now directed at the end-of-life needs and of care provided to people with living with HIV (PLWH) (1, 2). Death among PLWH is usually reported as a failure endpoint of clinical trials or treatment, or as an area of enquiry in establishing evidence for the impact on mortality of early testing. Given the evidence of ageing, comorbidities and the continuing higher mortality compared to the general population, and associated levels of distress, research and clinical care must address end-of-life alongside optimising testing and treatment.

Epidemiology of progressive conditions and death among people living with HIV

UNAIDS estimates that during 2016 there were 1 million AIDS related deaths (3) (95%CI 830,000-1,200,000). This is unequally distributed, with 18,000 AIDS deaths in Western & Central Europe and North America out of a total 2,100,000 PLWH (i.e. 0·9% of PLWH) compared to 730,000/25,500,000 in sub-Saharan Africa (2.9%). Although AIDS mortality rates are falling, mortality is significantly higher among people living with HIV compared to the general population for all causes in the UK i.e. (where universal ART access is provided) (standard mortality ratio 5·7, 95% CI 5·5-5·8) (4). A systematic review of symptoms among people with AIDS found high symptom prevalence, e.g. fatigue 43-95%, anorexia 82%, pain 30-98%, breathlessness 43-62%, nausea and vomiting 43-61%, and depression 17-82% (See Table 1) (5). These data are drawn largely from pre-treatment studies and so represent

HIV-related rather than HIV-unrelated deaths, and the prevalence of physical and psychological symptoms was similar to data from people with advanced cancer. In addition to physical and psychological symptoms, patients and families express a desire for greater information and communication from health care professionals in advanced disease (6). Patients within sub-Saharan Africa identify their spiritual needs as having the greatest negative impact on quality of life (7-9).

As a consequence of ageing, comorbidity is become increasingly common among PLWH. Estimates from European cohorts suggest that while there has been a 28% decrease in infection-related malignancies since 2011, there was a 44% increase in infection-unrelated malignancies (10). In the USA and Brazil, overall risk of non-AIDS defining cancers (NADC) is higher than in the general population (Brazil standardised incidence ration = 1·4 [95% CI 1·1-1·9], USA = 1·3 [1·0-1·7]). After non-melanoma skin cancers, the most frequent NADCs were anal and lung cancer. For those diagnosed with a malignancy, survival is worse for PLWH, for example three year risk of death for people with Hodgkin's lymphoma is higher compared to those uninfected (hazard ratio [HR] = 2·37 [95% CI: 1·24-4·55], p=0·009) independently of calendar year, age, gender, type of chemotherapy and stage (11). Data from the USA, Europe and Australia has revealed that while AIDS-related deaths are reducing, non-AIDS cancer is now the leading non-AIDS cause of death, without no evidence of improvement over time (12).

Modelling from a Dutch cohort has estimated that by 2030, 28% of PLWH will have at least three non-communicable diseases (largely cardiovascular disease) (13). By the age of 60, the cumulative incidence of cardiovascular disease among men in the USA is 20·5% among the HIV-infected under ART, 14·6% among HIV-uninfected high-risk persons, and 12.8% in the general population (14). The odds of dying within 30 days of discharge following myocardial infarction are higher for PLWH compared to HIV negative people (odd ratio 2·42, 95% CI 1·00-4·92) (15).

Lastly, the dying phase for PLWH can bring enormous distress to their family members and caregivers. Caregivers of patients facing end-of-life with AIDS or cancer in sub-Saharan

Africa identified primary stressors as being delivering day-to-day patient care and emotional support; financial hardship, family responsibilities, and social isolation (16).

Table 1 Symptom prevalence in AIDS

Domain	Symptom	Prevalence range (%) N of patients
Physical	Fatigue/ tiredness/ weakness (17-19)	43-95% N = 528
	Anorexia (19)	82% N = 52
	Pain (including all different origins) (18-23)	2030-98% N = 1325
	Nausea – vomiting (18-20, 24)	41-57%(18-21)(18-21) N = 914
	Breathlessness/ dyspnoea/ shortness of breath/ respiratory distress (19-21)	43-62% N = 811
	Insomnia/ poor sleeping/ difficulty sleeping/ sleep disturbance (19-21)	40-74% N = 811
	Constipation (20, 21)	19-35% N = 759
	Diarrhoea (18, 20, 21)	29-53% N = 862
	Depression/ depressive mood/ sadness/ low mood (18-22, 25)	17-82% N = 1,211
Psychological	Anxiety/ nervousness/agitation (19-21, 25)	13-76% N = 923

Palliative care: definition, principles and effectiveness

The definition and principles of palliative care are set out in Figure 1.

Figure 1 The WHO definition and principles of palliative care (26)

The World Health Organisation (WHO) defines palliative care as “an approach which improves the quality of life of patients and their families facing life-threatening illness, through the prevention, assessment and treatment of pain and other physical, psychosocial and spiritual problems.” The principles of palliative care are:

- Provides relief from pain and other distressing symptoms
- Affirms life and regards dying as a normal process;
- Intends neither to hasten nor postpone death
- Integrates the psychological and spiritual aspects of patient care
- Offers a support system to help patients live as actively as possible until death
- Offers a support system to help the family cope during the patient’s illness and in their own bereavement
- Uses a team approach to address the needs of patients and their families, including bereavement counselling, if indicated
- Will enhance quality of life, and may also positively influence the course of illness

Randomised controlled trials (RCTs) of palliative care have demonstrated that palliative care reduces symptom burden, physical and psychological functioning, reduces in-hospital mortality and saves costs (27-29). Systematic reviews have identified benefits including

increased end-of-life discussions and documentation and improved psychosocial distress, satisfaction and concordance in care, quality of life and symptom burden (30, 31). Recently, innovative models of palliative care have recognised that benefits can be achieved by offering its person-centred, symptom controlling, holistic approach to patients and families earlier in the disease trajectory. RCTs from high income countries have found early palliative cancer care improves quality of life and care, symptom control, patient and caregiver satisfaction, survival, family depression, and costs (32-36). These models largely provide multiprofessional consultancy to assess needs and propose treatment plans to oncology services for better management of patient/family concerns (physical, psychological, social and spiritual). Effect sizes of early palliative care may be greater in low and middle income coutries (LMIC), given limited health resources, the socioeconomic implications of serious illness for families, and the higher population prevalence of co-morbidity(37). A further consideration in the global context is paediatric palliative care. While few deaths occur among children with HIV In high income countries, UNAIDS estimates that were 101,000 deaths among children aged 0-14 in 2016. Unfortunately, the evidence for paediatric palliative care needs and outcomes lags far behind that available for adults (38).

Palliative care applied to PLWH

A systematic review of the available evidence found that home palliative care and inpatient hospice care significantly improve outcomes for PLWH in the domains of pain and symptom control, anxiety, insight, and spiritual wellbeing (39). However, a model of the evidence of equity and access to palliative care for PLWH identified a number of barriers (40). These were largely service factors (e.g. low exposure to HIV, stigma and discrimination within hospice and palliative care services, disease-oriented focus of HIV services), clinician factors (e.g. tension between disease-oriented and palliative medicine practice, lack of willingness to address end of life, poor adherence to palliative protocols, fear of analgesia misuse and addiction); patient factors (e.g. acceptance of sub-optimal analgesia, reluctance

to address end of life); and disease factors (e.g. lack of predictability, complexity of management palliation and disease-oriented care concurrently).

As PLWH age due to widespread access to ART, they describe their concerns regarding old age care, specifically how their confidentiality will be maintained as they move between specialisms and care settings, the potential lack of HIV skills among health care professionals, and how efficiently their care will be coordinated (41). Given the epidemiological data on rising multimorbidity among PLWH, there is great need for attention to communication when accessing multiple clincial specialties (42). This was described in a study of end of life care by a gay man living with HV and advanced COPD (43), who noted that "*it's hard work going through twenty, thirty odd years of history… and you can't get your breath… and you're trying to explain and try and talk at the same time which makes it worse".* However, it is possible to develop and implement interprofessional education to expand access to HIV palliative care. Within sub-Saharan Africa this has been achieved through models of "competency building" in palliative care skills among existing HIV care and support teams (44).

Inequality has been identified in place of death for PLWH. Place of death is an important consideration in planning end-of-life care. Being able to choose one's place of death can relieve concerns about the unknown process of dying, reduce anxieties about the future, enhance quality of life and the quality of death (45). In European countries, the public express a strong preference to die at home (46), whereas in low income countries the preference is for hospital death (47, 48). This may reflect the global variability service provision to enable people to die at home(49), or the lack of personal resources to deliver care in the home compared to hospital. It may also reflect the stigma associated with HIV (50), which may lead to lack of informal support for home-based care. A study of admissions at a Ugandan national referral hospital found that 61% of all patients had HIV infection(51).

A retrospective analysis of data certification data in 11 countries found that hospital was most common place of death in all countries for PLWH, ranging from 56·6% in the Netherlands to 90·9% in South Korea (52). The least common places were hospice facility (3·3%-5·7%), nursing home (0%-17·6%) and home (5·9%- 26·3%). Age-standardised relative risk ratios found those with HIV less likely to die at home and more likely to die in hospital compared with cancer patients, and in most countries more likely to die in a nursing home. A comparative retrospective study of place of death in Ontario found that PLWH die younger that those dying without an underlying HIV diagnosis (56.1 vs 76.6 years), spend more days admitted to hospital in the last 90 days of life (20 vs 12·1days) and have higher costs in the last year of life ($80,885·62. vs. $53,869·77) (53).

Promoting person-centred care for PLWH at the end of life

It is argued that the early activism of PLWH moved health care from a disease to a people-centred approach (54). Person-centred care is in rooted in holistic health care that sees an individual as a complete being rather than focussing solely on the disease model (55). The palliative care movement was began by Dame Cicely Saunders to exemplify holistic, person-centred care for the patient and family facing terminal illness, originating the phrase “total pain” that is delivered thorugh consideration of physical, psychological, social and spiritual concerns (56). However, the advent of ART has arguably led to a focus away from the terminal care needs of PLWH towards a more behavioural and medical model of “test and treat”. In 1990, Veronica Moss of the Mildmay HIV hospice noted in that pre-ART era that “*It could be said that all care in AIDS is necessarily palliative, since no specific cure has yet been found”* (57). By 2003, HIV palliative care physician Peter Selwyn noted a new challenge post-ART *“Early in the epidemic HIV care providers were by definition palliative care providers. Now the challenge is to reacquaint”* (58). As innovative models of palliative care have been pioneered, and the person-centred approach more valued, Simms noted in 2012 that *“Modern palliative care offers effective ways to improve outcomes, not as an alternative or last resort”* (59). An example of integrating the principles of person-

centredness delivered though the palliative care model is the TOPcare trial (60-64). A two week training course in the principles and practice of palliative care delivered to existing ART clinic nurses, with a simple holistic assessment and care planning tool, improved patient quality of life, psychological morbidity and multidimensional person-centred outcomes (including stigma) compared to usual care.

The common experience of stigma among PLWH may influence end-of-life care delivery. While person-centred assessment and communication might enable people to make a choice for home death, common experiences of stigma and social isolation, especially in rural areas (65), may lead to unwanted admissions.

Careful attention to assessment and management of pain and other distressing symptoms is the hallmark of palliative care. Pain is the most prevalent physical symptom in AIDS (66). Effective pain control is low cost and has been successfully achieved in many parts of the world. However, despite being on the essential medicines list (67), stockouts of pain and symptom controlling drugs for PLWH are common in sub-Saharan Africa (68, 69).

Lastly, palliative care must respond to the demographics of those most affected by HIV-people of African heritage and men who have sex with men (MSM). Person-centredness "considers people's desires, values, family situations, social circumstances, and lifestyles; seeing the person as an individual" (70). Planning care should take into consideration the person's values, culture and beliefs (71). For people of African heritage, this may include taking account of their preferences for how end of life is managed in terms of traditional practices (72), meeting spiritual care needs (7, 73), and anticipating suboptimal analgesia (74). Given that lesbian, gay, bisexual and trans people may have higher incidence of life-limiting illness (75), the challenges of comorbidity may be greater. MSM may also have greater experience of disenfranchised grief (76). We advise palliative care providers to MSM at the end of life to implement the ACCESScare recommendations on end-of-life care (43) (see Table 2).

Table 2 ACCESScare recommendations

Individual level	Avoid using heterosexually framed or assumption laden language
	Demonstrate sensitivity in exploration of sexual orientation or gender history
	Respect individuals' preferences regarding disclosure of sexual identity or gender history
	Carefully explore intimate relationships and significant others, including biological and chosen family (friends)
	Explicitly include partners and/or significant others in discussions
Service / institutional level	Make clear statement of policies and procedures related to discrimination
	Include content regarding LGBT communities in training on diversity and discrimination
	Increase LGBT visibility in materials (in written content and images)
	Provide explicit markers of inclusion (e.g. rainbow lanyards or pin badges)
	Initiate partnerships and/or engagement with LGBT community groups

Global policy and guidance

Palliative care is a global human right (77), enabling patients and families to live well with progressive illness, improving their outcomes, and saving costs by reducing unplanned admissions and futile treatments (60, 78-81). Palliative care is recommended "throughout the illness course" for LMIC (82). The World Health Assembly (WHA) resolution on palliative care (Resolution 67·19, 2014) calls for palliative care "integrated throughout the life course", recognising it to be "fundamental to improving the quality of life, well-being, comfort and human dignity of individuals being an effective person-centred health service" (83). The most recent iteration of the WHO Universal Health Coverage goals call for the "full spectrum of

essential, quality health services, from health promotion to prevention, treatment, rehabilitation, and palliative care" (84). The WHO also calls for palliative care as an "essential component of a comprehensive package of care for people living with HIV/AIDS because of the variety of symptoms they can experience" (85).

However, global coverage of palliative care is inequitable, with a third of countries having no known activity in developing or delivering palliative care (86). The Economist's Global Quality of Death Index (as measured by national policy, integration into the health system, community engagement and presence of a palliative care movement), largely reflects GDP, with the world's richest countries dominating (the top three countries providing best quality of death being the UK, Australia and New Zealand).

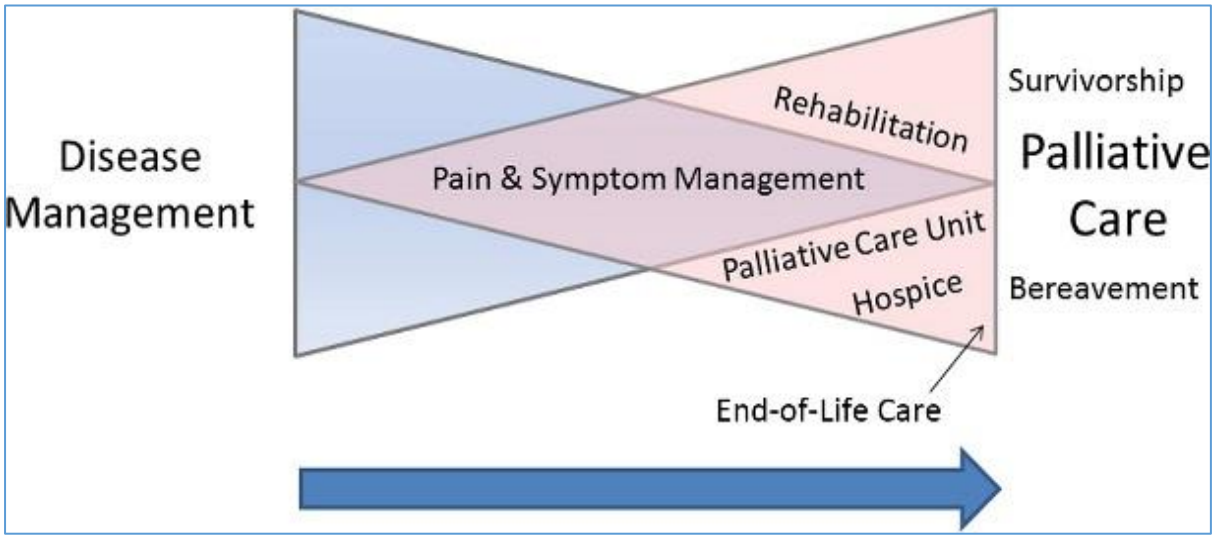
Recommendations

Palliative care is part of optimal medical management according to need not prognosis, and is not a "last resort" when it is felt there are no further disease-oriented options. Early integration of palliative care can improve outcomes and costs, and is highly relevant for the wide range of progressive and incurable comorbidities seen among PLWH, such as organ failure and malignancies. Early identification of preferences and integration of person-centred care, symptom management and advance care plans should enable professionals support patients where there is clinical uncertainty (i.e. treatment, prognosis or recovery are complex or unpredictable) (87).

Given that the high prevalence of symptoms is similar to other conditions (66), existing specialist palliative care services are skilled in managing these common palliative care symptoms and concerns. Therefore HIV-specific palliative care services may not be necessary if good teamwork between HIV physicians and palliative care teams can determine optimal treatment plans while minimising polypharmacy. This requires continuing professional education programmes for HIV clinical teams to include palliative and end-of -life care. Generalist palliative care skills are essential among all health care providers, with specialist services providing consultancy and training to other specialties, and hospice care available at the end of life (88).

A model for integration has been proposed that includes both disease-oriented management and palliative care (see Figure 2). The “bowtie” model (89) offers decreasing disease-oriented intervention and increasing palliative care until the end-of-life, with provision of bereavement care post-death.

Figure 2 The “Bowtie” model of palliative care integration from Hawley 2014.



The British HIV Association (BHIVA) have incorporated palliative care within the Standrads of Care for People Living With HIV (2018). These standards were generated by a multiprofessional clinical, academic and PLWH community working group, refined through community consultation, and endorsed by the medical and nursing Royal Colleges and professional bodies. The standards address health and social care and provide a set of palliative care quality statements and auditable outcomes for PLWH. These detailed recommendations are freely available www.bhiva.org/standards-of-care-2018.aspx, and we urge other countries to either adopt or locally adapt these standards with community consultation.

By paying attention to palliative and end-of-life care needs among PLWH, we will truly achieve an appropriate and effective continuum of care.

Search strategy and selection criteria

I searched the Cochrane Library PubMED and EMBASE using the search terms “palliative” “end-of-life” “terminal” AND HIV. I also searched reference lists and manually retrieved articles. I considered articles published in English between Jan 1 1980 and 14th Feb 2018. Papers were retained for this review if they described the epidemiology of comorbidity and mortality among people living HIV, evidence of palliative care-related needs, models of service delivery or evidence of effectiveness.

Declaration of interests

No conflicting interests exist.

Author contribution

RH conducted the literature searching, wrote and submitted the manuscript.

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